



**25**  
YEARS

More than 25 years contributing to sustainable development through our products and services for the wind industry worldwide.

**Servicing and Improving the Mechanical Drive Train**

ABS WIND IS A  
PROUD PARTNER OF



10UNC Mounting holes  
thread length

16 X 3/4-10UNC Mounting holes  
63.5 thread length

4 -M20

lifting holes

4-M10X1 oil holes  
depth 15

11°15'

33°45'

Ø16 ±1:50

operation holes

**REPAIR WORKSHOPS NETWORK  
SPARE PARTS & SUPPLY MANAGEMENT  
MAINTENANCE**

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# We are ABS Wind

An engineering company with more than 25 years of experience providing the highest quality parts, services, and solutions for the wind industry worldwide, employing responsible and sustainable management while promoting processes and procedures aimed to minimize the environmental impact of our operations.

## Mission

Optimize Wind industry production systems through our customized products and engineering solutions.

## Vision

Achieve global recognition of the technical excellence of our solutions, brands, and workshops network for the Wind industry.

## Company Values

### Transparency

Professional relationships based on **trust** and mutual **respect**, fully complying with our commitments and always maintaining an assertive, active and sincere communication.

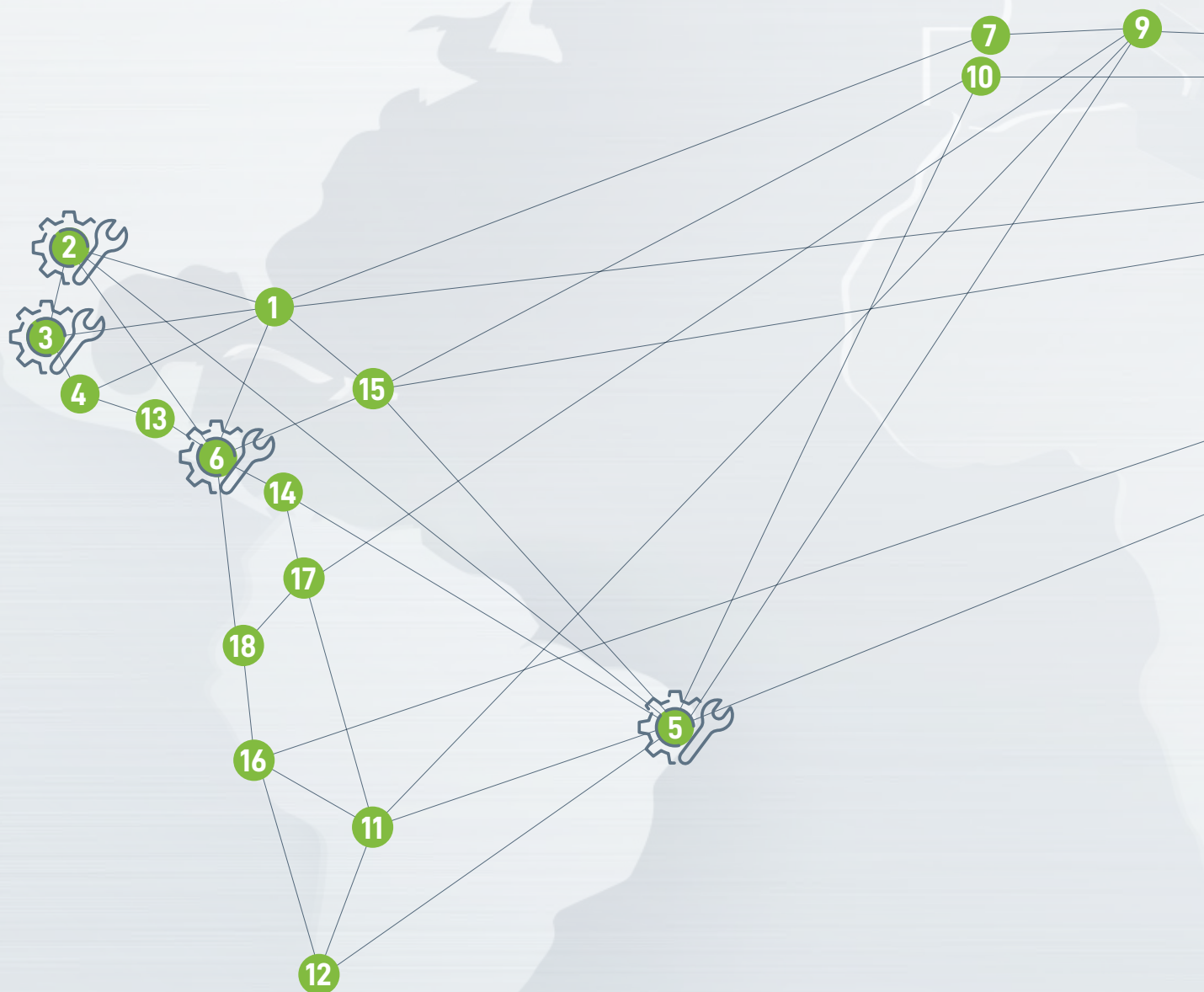
### Excellence

To serve our customers, continually **challenging ourselves** to achieve the highest quality standards in our products and services.

### Responsibility

Commitment to the environment and our surroundings, through practices committed to **sustainable** alternatives and ecological responsibility.

# We continue to expand our presence in emerging wind markets





More than 25 years supporting the Wind Industry  
More than 60 Engineers and Qualified Technicians  
dedicated to Gearbox Maintenance  
More than 300 Gearbox Units repaired



- 1 **Miami, USA** *Headquarters*
- 2 **Texas, USA** *Repair Center & Office*
- 3 **Puebla, MEXICO** *Repair Center & Office*
- 4 **Oaxaca, MEXICO** *Repair Center & Office*
- 5 **Natal, BRAZIL** *Repair Center & Office*
- 6 **Cartago, COSTA RICA** *Repair Center & Office*
- 7 **Pamplona, SPAIN** *Office & Warehouse*
- 8 **Dalian, CHINA** *Repair Center & Factory & Office*
- 9 **Milan, ITALY** *Repair Center & Factory & Office*
- 10 **Madrid, SPAIN** *Office*
- 11 **BOLIVIA** *Office*
- 12 **CHILE** *Office*
- 13 **GUATEMALA** *Office*
- 14 **PANAMÁ** *Office*
- 15 **SANTO DOMINGO** *Office*
- 16 **PERU** *Office*
- 17 **COLOMBIA** *Office*
- 18 **ECUADOR** *Office*

# Value proposition for the wind industry

A comprehensive offer with tailor-made solutions adapted to the needs of each client.



# Memberships and Certifications

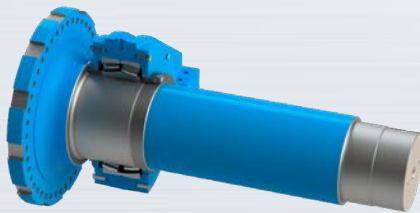


# Drivetrain Major Components



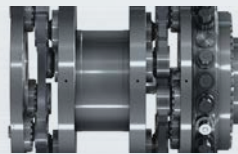
**Main Shaft  
Assembly**

**Yaw and Pitch  
Slewing Bearings**



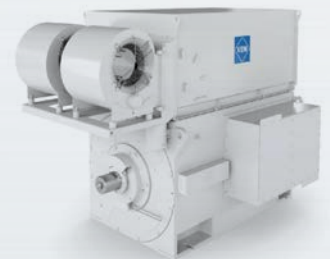
## **Main shaft assembly**

We manufacture and supply Main shaft assemblies and components for multi technologies, including upgrades and retrofits.



## **High speed coupling and brakes disk**

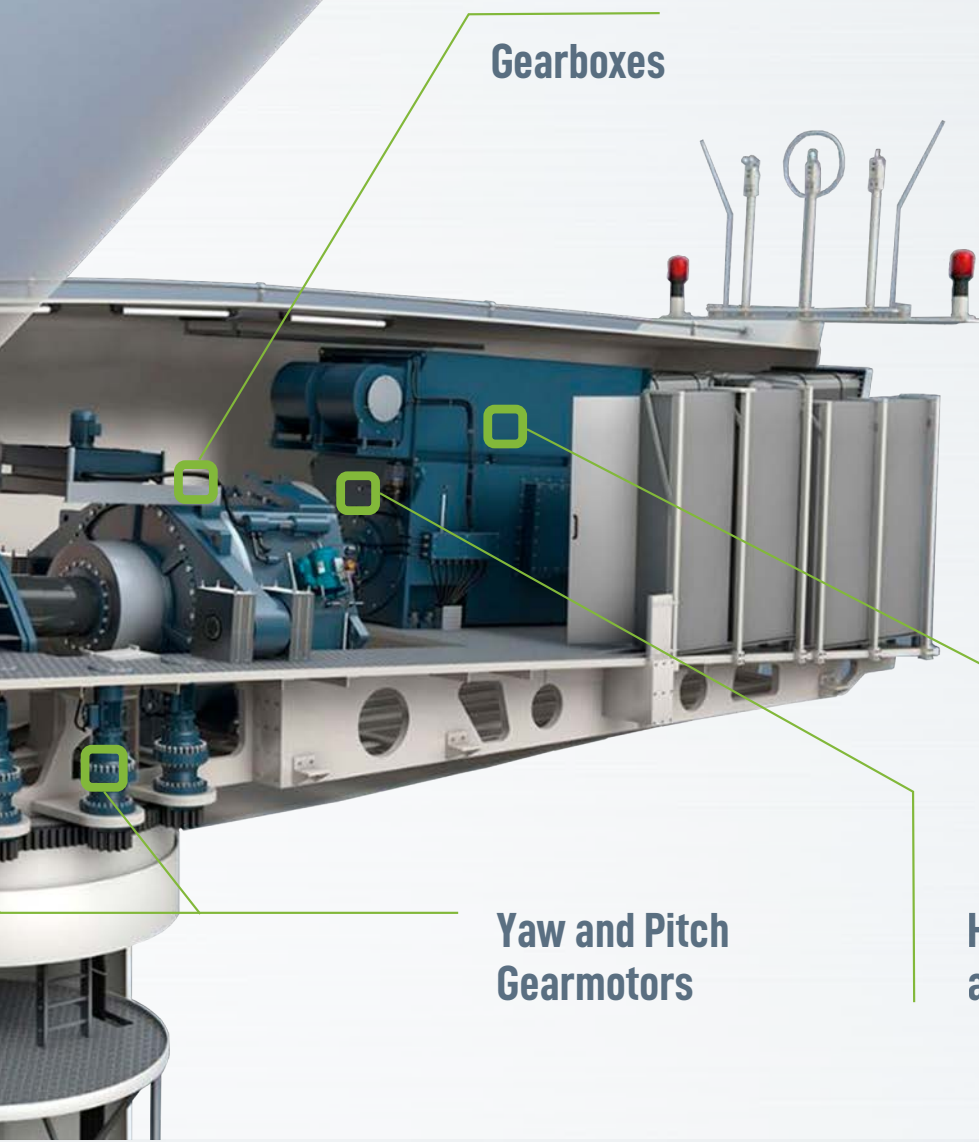
We provide bespoke coupling solutions for any brand or technology. Like the rest of our products, our Couplings undergo the most demanding quality controls.



## **Generators for wind industry**

Our wind Generators ensure maximum energy efficiency to achieve full system availability continuously.



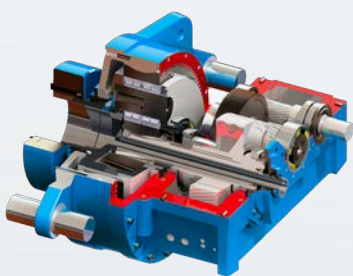


**Gearboxes**

**Generators**

**Yaw and Pitch Gearmotors**

**High speed Coupling and Brakes Disk**



**Gearboxes for Wind Industry**

Our Gearboxes for wind turbines are prepared to withstand high loads and the most demanding environmental conditions, ensuring reliability and efficiency at all times.



**Yaw and Pitch Slewing Bearings**

The Slewing bearings play a crucial role in the correct operation of wind turbines. It is essential to use high-quality Slewing bearings, such as those provided by ABS Wind, which guarantee the reliability and performance of the wind turbine even in the most challenging environments.



**Yaw and Pitch Gearmotors**

Our custom-made Yaw and Pitch Gearmotors meet leading wind turbine manufacturers' requirements and incorporate the latest technologies and industry findings to seek the most cost-effective solution.

# Hydraulic Components

Our team of specialized engineers designs hydraulic solutions for yaw brake, pitch control, and rotor brake, supplying hydraulic connectors to improve performance while making turbine maintenance more accessible and safer.



## Filtration Manifolds

ABS Wind supplies different technologies for the filtration of contamination by particles and water from the hydraulic fluid, which considerably reduces the need for maintenance and increases its reliability.



## Accumulators

The Accumulators are used, together with the hydraulic power units to control the pitch of the blades, as an auxiliary energy storage device and, in the event of a power failure, as a source of power to activate the brake calipers of the high-speed axle and yaw brake systems.



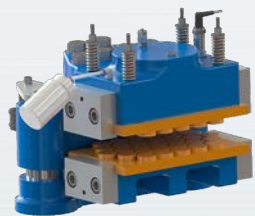
## Heat Exchangers

ABS wind turbine Heat exchangers are tailored to the requirements of leading manufacturers and are optimized to provide adequate cooling and low energy consumption even under the most severe conditions.



## Yaw Brakes

ABS Wind designs and manufactures Yaw Brakes for wind turbines with features tailored to each application and major manufacturers. All our Yaw Brakes are tested in simulation systems and then mechanically tested to ensure reliability and minimize turbine downtime.



## Rotor Brakes

ABS Wind supplies different Rotor brakes for wind turbines, ensuring maximum reliability through friction and resistance tests to determine the uniformity of braking characteristics and finite element analysis to verify structural safety.



## Pitch Cylinders

Our Pitch Cylinders have everything for optimum performance in wind turbine blade adjustment. They are custom-designed for use in multiple applications and are compatible with the hydraulic systems of the turbines designed by the leading manufacturers.



## Hydraulic Power Units

Depending on the model and requirements, our Power units can include pumps, reservoirs, and accumulators, relief valves, cylinders, filters and regulators, and instruments to monitor the performance, among other components. They can also be designed as open, closed, and combined.

# Preventive Maintenance Products



ABS Wind supplies the best products to avoid unpredictable failures in your turbines that can shut down your entire production.

Air filters  
Oil filters  
Oils

Grease  
Consumables: gloves, paper,  
flanges, solvents



# Lubrication Systems

Lubrication is an essential part of the operation and maintenance of the entire wind turbine structure and must meet stringent requirements. Proper lubrication provides reliability, protection and minimizes downtime for maintenance.

A constant and reliable lubricant supply is only possible through an automatic lubrication system. ABS Wind provides high-precision automatic lubrication solutions, delivering the right amount of new lubricant at the right time to all connected lubrication points:

Generator bearing	Mainshaft bearing
Yaw bearing	Variable pitch bearing
Yaw tooth surface	Variable pitch tooth surface



# ABS Wind Workshops

## Our Service *Your Guarantee*

- Gearbox disassembly, inspection, and reporting
- Full-Service repair and upgrade in workshop
- Multi-technology and multi-power repair capacity
- Full and partial load test bench
- Endoscopy and vibration analysis in shop
- Full main shaft repair services
- Root Cause Analysis and retrofit
- Large storage facilities including maintenance service
- Small and medium component repairs  
(Yaw & Pitch reducer, hydraulic cylinder, brake systems)
- With our in-house reverse engineering and manufacturing capabilities, we offer alternatives to our clients for current or discontinued components in the market





# Technologies



GE Renewable Energy



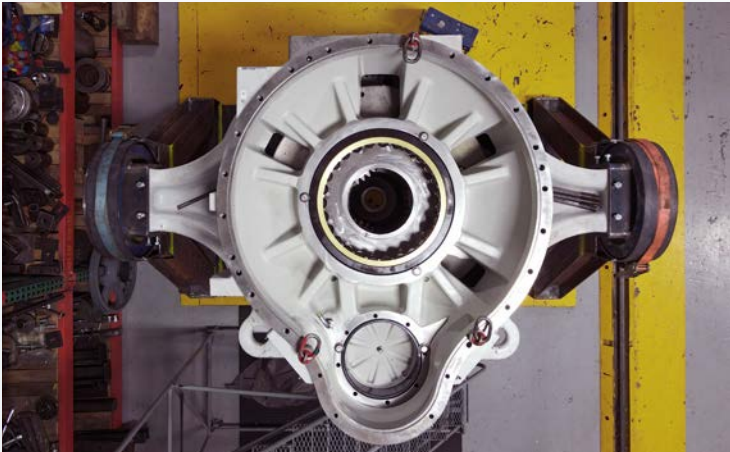
# ABS Wind Workshops

## Texas, USA

We offer affordable, high-quality repair services for the wind turbine fleet in the US.



ZF Wind Power and ABS Wind have formed a strategic partnership. This cooperation designates ABS Wind as the authorized and exclusive partner for the workshop repair of gearboxes and components for ZF Wind Power in America.



## Testing Capabilities

- Vibration Analysis
- Sound Analysis
- Oil Cleanliness Analysis
- Temperature Analysis
- Oil Pressure Analysis
- Complete Test Report

## Test Rig Specifications

Item	Description
Motors	<i>GE Custom 8000 [R]</i>
Model No.	<i>5KAF84111494901</i>
Max Nominal Power (kW)	<i>2,237 theoretical 1,800 operational</i>
Rated Speed (rpm)	<i>1,800</i>
Control System	<i>TMEIC 6F3A4768</i>



# ABS Wind Workshops

## Puebla, Mexico



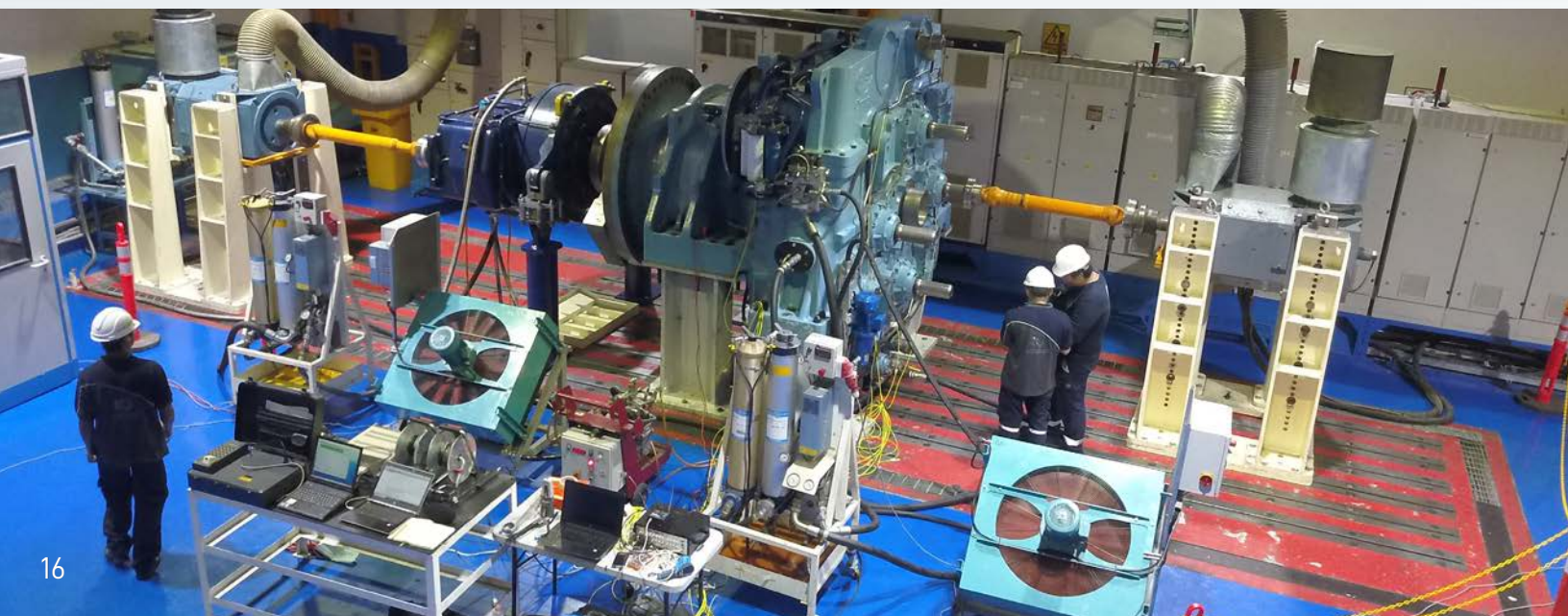
### Testing Capabilities

- Vibration Analysis
- Sound Analysis
- Oil Cleanliness Analysis
- Temperature Analysis
- Oil Pressure Analysis
- Complete Test Report



### Test Rig Specifications

Item	Description
Configuration	2 Gearboxes Back-to-Back
Max Nominal Power (kW)	850 kW @ 1830 rpm
Control System	ABB Control Panel





# Oaxaca, Mexico

ABS Oaxaca's Workshop is located within the Windfarms area, providing quick access to our customers and minimizing their downtime.

**Workshop capabilities:**

- Main shafts repair services
- Yaw and pitch gearmotors repair
- Hydraulic cylinders testing and repair services
- Brakes systems testing and repair services
- Yaw and pitch bearing inspections and repair services
- Exchange Program for selected small components



# ABS Wind Workshops

## Natal, Brazil

Repair Center for Main and Small Components in the Wind Industry.

The 2.5 MW Test Rig covers approximately 90% of the gearboxes installed in Brazil with all test parameters already established in its software, considering all accessories, fixtures, and tools necessary for each assembly.



**Vestas**

Vestas and ZF Wind Power have entered into a partnership with ABS Wind for the maintenance of components produced by ZF Wind Power in Brazilian territory.

### Test Rig Specifications

Item	Description
Total Weight	100 t
Max Nominal Power (kW)	2,520 kW @ 1,492 rpm
Max Torque	16,130 Nm
Max Speed	2,000 rpm



### The largest test bench for wind gearboxes in LATAM



# Cartago, Costa Rica

Workshop capabilities to repair Wind Gearboxes and Small Component including the Spin Test and Vibration, Noise, Temperature, and Oil Pressure Testing.



# Workshops Capabilities Matrix

Turbine Brand	Turbine Type	Power (kW)	ABS Wind Brasil	ABS Wind Costa Rica	ABS Wind Mexico	ABS Wind USA
			25 t	20 t	45 t	20 t
			2,500 kW	0 kW	850 kW	1,875 kW
ACCIONA	AW 1500	1500	●	○	◐	●
	AW 3000	3000	◐	○	◐	◐
ALSTOM	ECO 62	1300	●	○	◐	●
	ECO 74	1670	●	○	◐	●
	ECO 80	1650	●	○	◐	●
	ECO 100	3000	◐	○	◐	◐
	ECO 110	3000	◐	○	◐	◐
	ECO 122	2700	●	○	◐	◐
BONUS	BONUS 600	600	●	○	●	●
	EHN 1300	1300	●	○	◐	●
	B76/2000	2000	●	○	◐	●
CLIPPER	LIBERTY	2500	●	○	◐	◐
GAMESA	G39	600	●	○	●	●
	G4X	660	●	○	●	●
	G5X	850	●	○	●	●
	G8X-2000	2000	●	○	◐	●
	G9X-2000	2000	●	○	◐	●
GE	GE 1.5	1500	●	○	◐	●
	GE 2.5	2500	●	○	◐	◐
MITSUBISHI	MHI 600	600	●	○	●	●
	MHI 1000	1000	●	○	◐	●
	4/48	750	●	○	◐	●
	NM 64	1500	●	○	●	●
	NM 72	1500	●	○	◐	●
	NM 82	1500	●	○	◐	◐
	NM 92	2750	●	○	◐	●
	NM 52	1650	◐	○	◐	●
	NM 110	4200	◐	○	◐	◐

● Full Load Test
◐ Partial Load Test
○ Spin Test

Turbine Brand	Turbine Type	Power (kW)	ABS Wind Brasil	ABS Wind Costa Rica	ABS Wind Mexico	ABS Wind USA
			25 t	20 t	45 t	20 t
			2,500 kW	0 kW	850 kW	1,875 kW
<b>NORDEX</b>	N50	825	●	○	●	●
	N54	1080	●	○	◐	●
	N60	1300	●	○	◐	●
	S70/77	1500	●	○	◐	●
	N80 / N90	2300	●	○	◐	◐
<b>SENVION</b>	48/750	750	●	○	●	●
	HSW 1000	1000	●	○	◐	●
	MM70	2000	●	○	◐	●
	MM82	2000	●	○	◐	●
	MM92	2000	●	○	◐	●
	5M	5000	◐	○	◐	◐
	6M	6000	◐	○	◐	◐
XM104	3400	◐	○	◐	◐	
<b>SIEMENS</b>	SWP-1300	1300	●	○	◐	●
	SWP-1500	1500	●	○	◐	●
	SWT-2.3	2300	●	○	◐	◐
	SWT-3.6	3600	◐	○	◐	◐
<b>SUZLON</b>	S62	1000	●	○	◐	●
	S64 / 66	1250	●	○	◐	●
	S82	1500	●	○	◐	●
	S88	2100	●	○	◐	◐
	S9X	2100	●	○	◐	◐
	S11X	2100	●	○	●	●
<b>VESTAS</b>	V39	600	●	○	◐	◐
	V4x	660	●	○	●	●
	V52	850	●	○	●	●
	V66	1650	●	○	◐	●
	V80	2000	●	○	◐	●
	V82	1650	●	○	◐	●
	V90	3000	◐	○	◐	◐
	V100	3000	◐	○	◐	◐

# Uptower Repair and Maintenance Services

Our Wind turbine uptower repair and maintenance services are carried out with the highest quality and safety guarantees. Our certified technicians develop procedures and test different solutions before applying them in the field. This significantly reduces the risk of unforeseen events during field operation, ensuring maximum operational availability of the installation and extending its service life.

## Services

- Structural inspection of blades and towers with thermographic camera
- Blade inspections using drone photography
- Borescope inspections
- Vibration analysis
- Replacement of shafts and bearings
- Retrofits application
- Start and end of warranty inspections
- Vertical Technicians ANETVA / SPRAT
- Blade, nacelle, and tower cleaning
- Monitoring

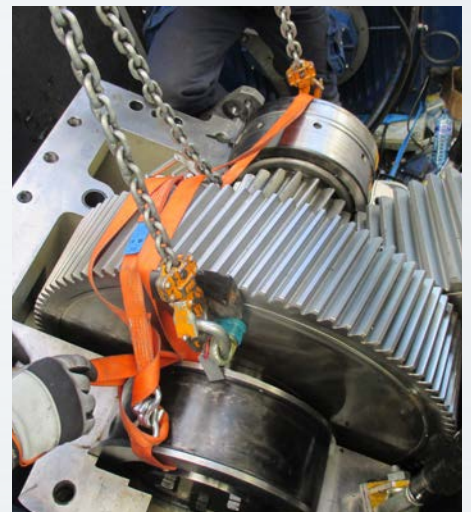
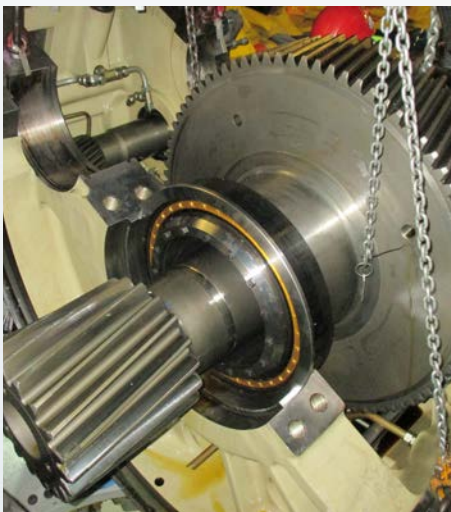
## UPTOWER REPAIR HUBS

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## Maximize your Production / Reduce Risks / Optimize Costs





**25**  
YEARS



### ABS Wind HQ

8208 NW 30th Terrace  
Miami FL, 33122 USA  
Office: +1 305 592 4404  
Direct: +1 305 777 1743

### ABS Wind USA

*Workshop & Test Bench* 2000 Bell Drive, Big Spring TX, 79720  
*Workshop* 604 N. Owens, Big Spring TX, 79720  
*Storage* 1380 E Airpark Dr, Big Spring TX, 79720

### ABS Wind Mexico

*Puebla Workshop*  
Avenida 15 de Mayo 3908,  
Col. Villa Posadas  
Puebla, Puebla. CP 72060  
México

*Oaxaca Workshop*  
Calle 5 de Febrero No. 1,  
Col. Tercera Sección  
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México

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